

REMARKS

Claims 2-4, 6, 8, 11-15, and 18-26 are pending in this application. Claims 2, 6, 8, 11-12, 15 and 18 have been amended herein and claims 21-26 are added herein. In addition, claims 1, 5, 7, 9 and 16-17 were previously canceled and claim 10 has been canceled herein. Applicant respectfully requests reconsideration of the claims in view of the following remarks.

Claims 2-4, 6, and 8 are rejected under 35 U.S.C. §102(e) as being anticipated by Smith et al. (U.S. Patent No. 5,944,537). Applicant respectfully traverses this rejection.

Claim 6 as amended recites, "a *substantially linear* elongated member including a fixed end that is fastened in a holding element; a contact tip attached at a free end of the substantially linear elongated member" (emphasis added). Applicant respectfully submits that the references of record do not teach or suggest the limitations of claim 6 as amended.

Unlike in the present application, Smith deals with a curved spring member that acts as a contact between two surfaces. Smith, Fig. 6; Smith col. 3, lines 53-55 ("spring contact[s] ... bend away from a substrate to form a "shepherd's hook" shape"); Smith col. 5, lines 55-60 ("spring contact ... bend[s] into the shape of an arc having a radius r"). In contrast, the present application requires a substantially linear elongated member and a contact tip attached to the substantially linear elongated member. Therefore, Smith does not teach or suggest the limitations of the present application.

Further, claim 6 requires that "at least a portion of the surface of the contact tip is provided with a coating of a titanium nitride; and an adhesive layer of titanium arranged beneath the titanium nitride layer so that the adhesive layer is between the surface of the contact tip and the titanium nitride layer." As noted in the Amendment filed August 11, 2005, the reference by

Smith does not teach or suggest a titanium adhesive layer beneath a titanium nitride layer. The Response to Argument section of the Office Action does not address this fact.

As noted in the Office Action, Smith does teach an adhesive layer of titanium. See Col. 10, lines 19-25 (which were cited in the Office Action). A reading of this section, however, indicates that Smith teaches an adherence layer to provide good bonding between gold and the adherence layer. Col. 10, lines 17-24 (emphasis added). Smith goes on to say that "titanium is preferred because it can be etched with high selectivity to the gold and the spring contact 15 by plasma etching with fluorine atoms," Col. 10, lines 25-26. Smith never teaches or suggests using an adhesive layer of titanium arranged beneath the titanium nitride layer, as required by claim 6. In fact, there is no indication the titanium can be etched with a high selectivity to titanium nitride, which is the desired characteristic taught by Smith.

Therefore, it is respectfully submitted that claim 6 is allowable over the references of record.

Claims 2-4, and 8 depend from claim 6 and add further limitations. It is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding additional limitations.

Claim 10 is rejected under 35 U.S.C. §102(e) as being anticipated by Smith and claims 11-15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Smith. Claim 10 has been canceled and claim 11 has been placed into independent form. Since claim 11 has not been amended in scope or meaning, final rejection of this claim under any reference other than Smith by itself will be inappropriate. Applicant respectfully submits that claim 11, as originally filed, is not anticipated by or obvious in view of the references of record.

Claim 11, as originally filed, recites "coating at least in the area of the contact tip with a titanium layer prior to the coating with titanium nitride, wherein the coating with titanium and titanium nitride takes place in situ." Applicant respectfully submits that the references of record do not teach or suggest the limitations of claim 11.

Unlike in the present application, deposition of an adhesive layer and a hard coating layer over the contact tip of the probe needle in Smith is not in situ. In fact, nowhere in Smith is there any suggestion that the adhesive layer and coating layer may be deposited in situ. Smith teaches an adhesive layer of titanium and a coating layer of gold, which must be deposited in separate processes. See Smith, col. 10, lines 16-26.

In fact, Smith never discusses or suggests that an adhesive layer of titanium can be used in conjunction with a coating layer of titanium nitride. Smith merely points out that a coating layer of titanium nitride can be used to harden the contact tip surface, and in a separate discussion regarding a different spring design points out that titanium may be used as an adherence layer with gold. Smith, col. 9, lines 14-20; col. 10, lines 16-26. Therefore, Applicant respectfully submits Smith does not teach or suggest the limitations of claim 11.

In rejecting claim 11, the Office Action states that it would have been obvious "to use different method to coat the probe needle for the purpose of providing the durability and reliability of the probe needle during the contact process." Applicant respectfully disagrees. Smith provides no suggestion, much less teaching, of coating with titanium and titanium nitride in situ. Smith only teaches using a titanium adherence layer with a gold coating. One of ordinary skill in the art would not know how to perform these processes in situ. An unsupported statement to the contrary does not change this fact. Moreover, one reading a reference teaching

consecutive depositions of titanium and gold would not be taught to coat with titanium and titanium nitride in situ. As a result, the subject matter of claim 11 is not obvious.

Claims 12-15 depend from claim 11 and add further limitations. It is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding additional limitations.

Claims 18-20 are rejected under 35 U.S.C. §102(e) as being anticipated by Smith. Applicant respectfully traverses this rejection.

Claim 18, as amended, recites "contacting a test probe to at least one of the pads, the test probe being attached to a probe card, the test probe including a substantially linear elongated member with a contact tip fastened to, the elongated member extending away from the probe card, the contact tip being coated with a layer of titanium and a layer of titanium nitride overlying the layer of titanium." Applicant respectfully submits that the references of record do not teach or suggest the limitations of claim 18 as amended.

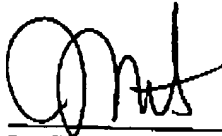
As discussed above, Smith does not teach or suggest that the test probe includes a substantially linear elongated member. In fact, as previously mentioned, the elongated member in Smith is necessarily curved. As a result, the shape of the test probe in the present application is unlike that in Smith. Therefore, Smith does not teach or suggest the limitations of the present application.

Claims 19-20 depend from claim 18 and add further limitations. It is respectfully submitted that these dependent claims are allowable by reason of depending from an allowable claim as well as for adding additional limitations.

Claims 21-26 have been added herein. No new matter has been added. It is respectfully submitted that each of these dependent claims are allowable over the references of record.

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Ira S. Matsil, Applicant's attorney, at 972-732-1001 so that such issues may be resolved as expeditiously as possible. No fee is believed due in connection with this filing. However, should one be deemed due, the Commissioner is hereby authorized to charge Deposit Account No. 50-1065.

Respectfully submitted,



Ira S. Matsil
Attorney for Applicant
Reg. No. 35,272

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Date

Slater & Matsil, L.L.P.
17950 Preston Rd., Suite 1000
Dallas, Texas 75252-5793
Tel. 972-732-1001
Fax: 972-732-9218